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Sequence Listing was accepted.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866)
217-9197 (toll free).

Reviewer: Anne Corrigan

Timestamp: [year=2007; month=12; day=3; hr=15; min=53; sec=48; ms=838;]

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Application No: 10757077

Version No: 5.0

Input Set:

Output Set:

Started: 2007-11-09 16:10:30.175

Finished: 2007-11-09 16:10:37.437

Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 262 ms

Total Warnings: 136

Total Errors: 24

No. of SeqIDs Defined: 148

Actual SeqID Count: 148

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 402	Undefined organism found in <213> in SEQ ID (14)
W 402	Undefined organism found in <213> in SEQ ID (15)
W 402	Undefined organism found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (20)
W 213	Artificial or Unknown found in <213> in SEQ ID (21)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (21)
W 213	Artificial or Unknown found in <213> in SEQ ID (22)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (22)
W 213	Artificial or Unknown found in <213> in SEQ ID (23)

Input Set:

Output Set:

Started: 2007-11-09 16:10:30.175
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Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 262 ms
Total Warnings: 136
Total Errors: 24
No. of SeqIDs Defined: 148
Actual SeqID Count: 148

Error code	Error Description
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (23)
W 213	Artificial or Unknown found in <213> in SEQ ID (24)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (24)
W 213	Artificial or Unknown found in <213> in SEQ ID (25)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (25)
W 213	Artificial or Unknown found in <213> in SEQ ID (26)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (26)
W 402	Undefined organism found in <213> in SEQ ID (27)
W 402	Undefined organism found in <213> in SEQ ID (28)
W 402	Undefined organism found in <213> in SEQ ID (29)
W 402	Undefined organism found in <213> in SEQ ID (30)
W 402	Undefined organism found in <213> in SEQ ID (31)
W 402	Undefined organism found in <213> in SEQ ID (32)
W 402	Undefined organism found in <213> in SEQ ID (33)
W 402	Undefined organism found in <213> in SEQ ID (34)
W 402	Undefined organism found in <213> in SEQ ID (35)
W 402	Undefined organism found in <213> in SEQ ID (36)
W 402	Undefined organism found in <213> in SEQ ID (37)
W 402	Undefined organism found in <213> in SEQ ID (38)
W 402	Undefined organism found in <213> in SEQ ID (39)

Input Set:

Output Set:

Started: 2007-11-09 16:10:30.175
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Total Warnings: 136
Total Errors: 24
No. of SeqIDs Defined: 148
Actual SeqID Count: 148

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (40)
W 402	Undefined organism found in <213> in SEQ ID (41)
W 402	Undefined organism found in <213> in SEQ ID (42) This error has occurred more than 20 times, will not be displayed
E 201	Mandatory field data missing in <223> in SEQ ID (128)
W 213	Artificial or Unknown found in <213> in SEQ ID (136)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (136)
W 213	Artificial or Unknown found in <213> in SEQ ID (137)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (137)
W 213	Artificial or Unknown found in <213> in SEQ ID (138)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (138)
W 213	Artificial or Unknown found in <213> in SEQ ID (139)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (139)
W 213	Artificial or Unknown found in <213> in SEQ ID (140)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (140)
W 213	Artificial or Unknown found in <213> in SEQ ID (141)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (141)
W 213	Artificial or Unknown found in <213> in SEQ ID (142)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (142)
W 213	Artificial or Unknown found in <213> in SEQ ID (143)

Input Set:

Output Set:

Started: 2007-11-09 16:10:30.175
Finished: 2007-11-09 16:10:37.437
Elapsed: 0 hr(s) 0 min(s) 7 sec(s) 262 ms
Total Warnings: 136
Total Errors: 24
No. of SeqIDs Defined: 148
Actual SeqID Count: 148

Error code	Error Description
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (143)
W 213	Artificial or Unknown found in <213> in SEQ ID (144)
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (144)
W 213	Artificial or Unknown found in <213> in SEQ ID (145) This error has occurred more than 20 times, will not be displayed
E 224	<220>,<223> section required as <213> has Artificial sequence or Unknown in SEQID (145) This error has occurred more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Steward, Lance E.

Fernandez-Salas, Ester

Herrington, Todd

Aoki, Kei Roger

<120> Clostridial Neurotoxin Compositions and

Modified Clostridial Neurotoxins

<130> 17355CIP3 (BOT)

<140> 10757077

<141> 2004-01-14

<150> US 09/910,346

<151> 2001-07-20

<150> US 09/620,840

<151> 2000-07-21

<150> US 10/163,106

<151> 2003-06-04

<160> 148

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 7

<212> PRT

<213> Clostridium botulinum serotype A

<400> 1

Phe Glu Phe Tyr Lys Leu Leu

1

5

<210> 2

<211> 7

<212> PRT

<213> Rattus norvegicus

<400> 2

Glu Glu Lys Arg Ala Ile Leu

1

5

<210> 3

<211> 7

<212> PRT

<213> Rattus norvegicus

<400> 3

Glu Glu Lys Met Ala Ile Leu
1 5

<210> 4
<211> 7
<212> PRT
<213> Rattus norvegicus

<400> 4
Ser Glu Arg Asp Val Leu Leu
1 5

<210> 5
<211> 7
<212> PRT
<213> Rattus norvegicus

<400> 5
Val Asp Thr Gln Val Leu Leu
1 5

<210> 6
<211> 7
<212> PRT
<213> Mus musculus

<400> 6
Ala Glu Val Gln Ala Leu Leu
1 5

<210> 7
<211> 7
<212> PRT
<213> Xenopus laevis

<400> 7
Ser Asp Lys Gln Asn Leu Leu
1 5

<210> 8
<211> 7
<212> PRT
<213> Gallus gallus

<400> 8
Ser Asp Arg Gln Asn Leu Ile
1 5

<210> 9
<211> 7
<212> PRT

<213> *Ovis aries*

<400> 9

Ala Asp Thr Gln Val Leu Met

1 5

<210> 10

<211> 7

<212> PRT

<213> *Homo sapiens*

<400> 10

Ser Asp Lys Asn Thr Leu Leu

1 5

<210> 11

<211> 7

<212> PRT

<213> *Homo sapiens*

<400> 11

Ser Gln Ile Lys Arg Leu Leu

1 5

<210> 12

<211> 7

<212> PRT

<213> *Homo sapiens*

<400> 12

Ala Asp Thr Gln Ala Leu Leu

1 5

<210> 13

<211> 7

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 13

Asn Glu Gln Ser Pro Leu Leu

1 5

<210> 14

<211> 12

<212> PRT

<213> *Clostridium botulinum* serotype A

<400> 14

Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp

1 5 10

<210> 15
<211> 11
<212> PRT
<213> Clostridium botulinum serotype A

<400> 15
Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp
1 5 10

<210> 16
<211> 4
<212> PRT
<213> Clostridium botulinum serotype A

<400> 16
Met Tyr Lys Asp
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<210> 17
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> SITE
<222> (1)...(7)
<223> Consensus sequence for Leucine-based motif.

<221> VARIANT
<222> (1)...(1)
<223> Xaa is any amino acid.

<221> VARIANT
<222> (3)...(5)
<223> Xaa is any amino acid.

<400> 17
Xaa Asp Xaa Xaa Xaa Leu Leu
1 5

<210> 18
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<223> Consensus sequence for Leucine-based motif.

<221> VARIANT
<222> (1)...(1)
<223> Xaa is any amino acid.

<221> VARIANT
<222> (3)...(5)
<223> Xaa is any amino acid.

<400> 18
Xaa Glu Xaa Xaa Xaa Leu Leu
1 5

<210> 19
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
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<223> Consensus sequence for Leucine-based motif.

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<222> (1)...(1)
<223> Xaa is any amino acid.

<221> VARIANT
<222> (3)...(5)
<223> Xaa is any amino acid.

<400> 19
Xaa Asp Xaa Xaa Xaa Leu Ile
1 5

<210> 20
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<221> SITE
<222> (1)...(7)
<223> Consensus sequence for Leucine-based motif.

<221> VARIANT
<222> (1)...(1)
<223> Xaa is any amino acid.

<221> VARIANT
<222> (3)...(5)
<223> Xaa is any amino acid.

<400> 20
Xaa Asp Xaa Xaa Xaa Leu Met
1 5

<210> 21
<211> 7

<212> PRT
 <213> Artificial Sequence

 <220>
 <221> SITE
 <222> (1)...(7)
 <223> Consensus sequence for Leucine-based motif.

 <221> VARIANT
 <222> (1)...(1)
 <223> Xaa is any amino acid.

 <221> VARIANT
 <222> (3)...(5)
 <223> Xaa is any amino acid.

 <400> 21
 Xaa Glu Xaa Xaa Xaa Leu Ile
 1 5

 <210> 22
 <211> 7
 <212> PRT
 <213> Artificial Sequence

 <220>
 <221> SITE
 <222> (1)...(7)
 <223> Consensus sequence for Leucine-based motif.

 <221> VARIANT
 <222> (1)...(1)
 <223> Xaa is any amino acid.

 <221> VARIANT
 <222> (3)...(5)
 <223> Xaa is any amino acid.

 <400> 22
 Xaa Glu Xaa Xaa Xaa Ile Leu
 1 5

 <210> 23
 <211> 7
 <212> PRT
 <213> Artificial Sequence

 <220>
 <221> SITE
 <222> (1)...(7)
 <223> Consensus sequence for Leucine-based motif.

 <221> VARIANT
 <222> (1)...(1)
 <223> Xaa is any amino acid.

<221> VARIANT
<222> (3)...(5)
<223> Xaa is any amino acid.

<400> 23
Xaa Glu Xaa Xaa Xaa Leu Met
1 5

<210> 24
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<221> SITE
<222> (1)...(4)
<223> Consensus sequence for Tyrosine-based motif.

<221> VARIANT
<222> (2)...(3)
<223> Xaa is any amino acid.

<221> VARIANT
<222> (4)...(4)
<223> Xaa is any hydrophobic amino acid.

<400> 24
Tyr Xaa Xaa Xaa
1

<210> 25
<211> 50
<212> PRT
<213> Artificial Sequence

<220>
<221> PEPTIDE
<222> (1)...(50)
<223> Peptide comprising a 6x His tag and S-tag

<400> 25
Met His His His His His Ser Ser Gly Leu Val Pro Arg Gly Ser
1 5 10 15
Gly Met Lys Glu Thr Ala Ala Ala Lys Phe Glu Arg Gln His Met Asp
20 25 30
Ser Pro Asp Leu Gly Thr Asp Asp Asp Asp Lys Ala Met Tyr Lys Asp
35 40 45
Pro Val
50

<210> 26
<211> 14
<212> PRT

<213> Artificial Sequence

<220>

<221> PEPTIDE

<222> (1)...(14)

<223> Peptide comprising a 6x His tag

<400> 26

Asn Phe Thr Lys Leu Thr Arg Ala His His His His His
1 5 10

<210> 27

<211> 8

<212> PRT

<213> Clostridium botulinum serotype A

<400> 27

Pro Phe Val Asn Lys Gln Phe Asn
1 5

<210> 28

<211> 22

<212> PRT

<213> Clostridium botulinum sertotype A

<400> 28

Lys Asn Phe Thr Gly Leu Phe Glu Phe Tyr Lys Leu Leu Cys Val Arg
1 5 10 15
Gly Ile Ile Thr Ser Lys
20

<210> 29

<211> 438

<212> PRT

<213> Clostridium botulinum sertotype A

<400> 29

Met Pro Phe Val Asn Lys Gln Phe Asn Tyr Lys Asp Pro Val Asn Gly
1 5 10 15
Val Asp Ile Ala Tyr Ile Lys Ile Pro Asn Ala Gly Gln Met Gln Pro
20 25 30
Val Lys Ala Phe Lys Ile His Asn Lys Ile Trp Val Ile Pro Glu Arg
35 40 45
Asp Thr Phe Thr Asn Pro Glu Glu Gly Asp Leu Asn Pro Pro Pro Glu
50 55 60
Ala Lys Gln Val Pro Val Ser Tyr Tyr Asp Ser Thr Tyr Leu Ser Thr
65 70 75 80
Asp Asn Glu Lys Asp Asn Tyr Leu Lys Gly Val Thr Lys Leu Phe Glu
85 90 95
Arg Ile Tyr Ser Thr Asp Leu Gly Arg Met Leu Leu Thr Ser Ile Val
100 105 110
Arg Gly Ile Pro Phe Trp Gly Gly Ser Thr Ile Asp Thr Glu Leu Lys
115 120 125
Val Ile Asp Thr Asn Cys Ile Asn Val Ile Gln Pro Asp Gly Ser Tyr

130		135		140	
Arg Ser Glu Glu Leu Asn Leu Val Ile Ile Gly Pro Ser Ala Asp Ile					
145		150		155	160
Ile Gln Phe Glu Cys Lys Ser Phe Gly His Glu Val Leu Asn Leu Thr					
	165		170		175
Arg Asn Gly Tyr Gly Ser Thr Gln Tyr Ile Arg Phe Ser Pro Asp Phe					
	180		185		190
Thr Phe Gly Phe Glu Glu Ser Leu Glu Val Asp Thr Asn Pro Leu Leu					
	195		200		205
Gly Ala Gly Lys Phe Ala Thr Asp Pro Ala Val Thr Leu Ala His Glu					
	210		215		220
Leu Ile His Ala Gly His Arg Leu Tyr Gly Ile Ala Ile Asn Pro Asn					
	225		230		235
Arg Val Phe Lys Val Asn Thr Asn Ala Tyr Tyr Glu Met Ser Gly Leu					
	245		250		255
Glu Val Ser Phe Glu Glu Leu Arg Thr Phe Gly Gly His Asp Ala Lys					
	260		265		270
Phe Ile Asp Ser Leu Gln Glu Asn Glu Phe Arg Leu Tyr Tyr Tyr Asn					
	275		280		285
Lys Phe Lys Asp Ile Ala Ser Thr Leu Asn Lys Ala Lys Ser Ile Val					
	290		295		300
Gly Thr Thr Ala Ser Leu Gln Tyr Met Lys Asn Val Phe Lys Glu Lys					
	305		310		315
Tyr Leu Leu Ser Glu Asp Thr Ser Gly Lys Phe Ser Val Asp Lys Leu					
	325		330		335
Lys Phe Asp Lys Leu Tyr Lys Met Leu Thr Glu Ile Tyr Thr Glu Asp					
	340		345		350
Asn Phe Val Lys Phe Phe Lys Val Leu Asn Arg Lys Thr Tyr Leu Asn					
	355		360		365
Phe Asp Lys Ala Val Phe Lys Ile Asn Ile Val Pro Lys Val Asn Tyr					
	370		375		380
Thr Ile Tyr Asp Gly Phe Asn Leu Arg Asn Thr Asn Leu Ala Ala Asn					
	385		390		395
Phe Asn Gly Gln Asn Thr Glu Ile Asn Asn Met Asn Phe Thr Lys Leu					
	405		410		415
Lys Asn Phe Thr Gly Leu Phe Glu Phe Tyr Lys Leu Leu Cys Val Arg					
	420		425		430
Gly Ile Ile Thr Ser Lys					
	435				

<210> 30

<211> 441

<212> PRT

<213> Clostridium botulinum sertotype B

<400> 30

Met Pro Val Thr Ile Asn Asn Phe Asn Tyr Asn Asp Pro Ile Asp Asn				
1	5	10	15	
Asn Asn Ile Ile Met Met Glu Pro Pro Phe Ala Arg Gly Thr Gly Arg				
	20	25	30	
Tyr Tyr Lys Ala Phe Lys Ile Thr Asp Arg Ile Trp Ile Ile Pro Glu				
	35	40	45	
Arg Tyr Thr Phe Gly Tyr Lys Pro Glu Asp Phe Asn Lys Ser Ser Gly				
	50	55	60	
Ile Phe Asn Arg Asp Val Cys Glu Tyr Tyr Asp Pro Asp Tyr Leu Asn				
65	70	75	80	

<400> 31

Tyr Ile Lys Ile

1

<210> 32

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 32

Tyr Asp Ser Thr

1

<210> 33

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 33

Tyr Gly Ser Thr

1

<210> 34

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 34

Tyr Asn Lys Phe

1

<210> 35

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 35

Tyr Met Lys Asn

1

<210> 36

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 36

Tyr Leu Asn Phe

1

<210> 37

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 37

Tyr Asp Gly Phe

1

<210> 38

<211> 4

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> PHOSPHORYLATION

<222> (1)...(4)

<223> Tyrosine-based motif

<400> 38

Tyr Lys Leu Leu

1

<210> 39

<211> 30

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> DOMAIN

<222> (1)...(30)

<223> Amino terminal 30 amino acids of light chain

<400> 39

Met	Pro	Phe	Val	Asn	Lys	Gln	Phe	Asn	Tyr	Lys	Asp	Pro	Val	Asn	Gly
1				5				10					15		
Val	Asp	Ile	Ala	Tyr	Ile	Lys	Ile	Pro	Asn	Ala	Gly	Gln	Met		
			20					25					30		

<210> 40

<211> 50

<212> PRT

<213> Clostridium botulinum serotype A

<220>

<221> DOMAIN

<222> (1)...(50)

<223> Carboxyl terminal 50 amino acids of light chain

<400> 40

Gly	Phe	Asn	Leu	Arg	Asn	Thr	Asn	Leu	Ala	Ala	Asn	Phe	Asn	Gly	Gln
1				5				10					15		
Asn	Thr	Glu	Ile	Asn	Asn	Met	Asn	Phe	Thr	Lys	Leu	Lys	Asn	Phe	Thr
			20					25					30		
Gly	Leu	Phe	Glu	Phe	Tyr	Lys	Leu	Leu	Cys	Val	Arg	Gly	Ile	Ile	Thr
		35						40				45			
Ser	Lys														
		50													

<210> 41

<211> 30

<212> PRT

<213> Clostridium botulinum serotype B

<220>

<221> DOMAIN

<222> (13)...(30)

<223> Amino terminal 30 amino acids of light chain

<400> 41

Met	Pro	Val	Thr	Ile	Asn	Asn	Phe	Asn	Tyr	Asn	Asp	Pro	Ile	Asp	Asn
1				5				10					15		
Asp	Asn	Ile	Ile	Met	Met	Glu	Pro	Pro	Phe	Ala	Arg	Gly	Thr		
			20					25					30		

<210> 42

<211> 50

<212> PRT

<213> Clostridium botulinum serotype B

<220>

<221> DOMAIN

<222> (1)...(50)

<223> Carboxyl terminal 50 amino acids of light chain

<400> 42

Tyr	Thr	Ile	Glu	Glu	Gly	Phe	Asn	Ile	Ser	Asp	Lys	Asn	Met	Gly	Lys
1				5					10					15	
Glu	Tyr	Arg	Gly	Gln	Asn	Lys	Ala	Ile	Asn	Lys	Gln	Ala	Tyr	Glu	Glu
			20					25					30		
Ile	Ser	Lys	Glu	His	Leu	Ala	Val	Tyr	Lys	Ile	Gln	Met	Cys	Lys	Ser